

What is claimed is:

1. A mechanical lift system that is primarily designed to open and close an existing vehicle canopy structure by means of hinges and a power lift arm.
2. The invention as claimed in claim 1, includes the securing of one side of any existing vehicle canopy to the upper side of a vehicle bed by means of a continuous hinge or a series of two or more single hinges so the said vehicle canopy may move from a closed horizontal position to an upright open vertical position or vice versa or stop at any position between open and closed while at the same time maintaining a secure stability of the said canopy at all times.
3. The invention as claimed in claim 1 is comprised partly, of a lift system which has a base plate and upright arm which is secured to the inside bed of a vehicle usually but not exclusively to the upper part of the wheel well. This positioning is primarily done to give the lift arm a balance of the canopy or cover during lift and close operations.
4. The invention as claimed in claim 1 is a continuation of claim 3, and is comprised partly, of a lift arm which is pivotally connected to the fixed upright arm and follows the inside contour of the vehicle canopy to the ceiling of said canopy, thence in a horizontal direction close to the canopy ceiling to the opposite side of the canopy.
5. The invention as claimed in claim 1, is a continuation of claim 4, and is comprised partly, of a down arm, which is pivotally attached to the lift arm at the ceiling of the said canopy and follows the downward contour of the said canopy to its base, where it is pivotally attached to an inside base plate which is secured to the inside base of the vehicle canopy. This is the lift arms contact point for raising and lowering the canopy.
6. The invention as claimed in claim 1, is comprised partly, of a 12 volt, direct current, linear actuator, which is powered by the said vehicle power system, in which its base is pivotally connected to the top of the base plate and its top is pivotally connected to the lift arm.
7. The invention as claimed in claim 1, is comprised wholly in accordance with claims 2 to 6.

8. The invention as claimed in claims 1 and 2, wherein said hinges are of sufficient size and shape and made with sufficient strength such as steel, stainless steel, or other alloys, to maintain the safety and efficiency of the canopy during lifting, closing, or any position in between.
9. The invention as claimed in claims 3 to 6, is made of plate and tubular steel of sufficient size as not to compromise the integrity or safety of the lift system. Other alloys such as aluminum or stainless steel may be used as long as they conform to all safety and integrity standards.
10. The invention as claimed in claim 6, has the 12 volt, direct current, linear actuator connected to the vehicle battery via heavy gauge wire with an inline 20 ampere fuse near the battery and a reverse polarity intermittent rocker toggle switch located at any convenient position between the linear actuator and vehicle battery. A heavy gauge ground wire is connected from the vehicle metal to the rocker switch and is continued to the linear actuator. While activated, the linear actuator has equal power to the lift arm in either upward or downward directions. Other power systems considered were hydraulic, electric/hydraulic, and pneumatic.
11. The invention as claimed in claim 1, may be installed on either side of the truck bed so the canopy may lift from any direction the installer desires. The lift system works equally from the left or right installation positions.